

# Food Product Machinery Manufacturing: 2002

Issued January 2005

EC02-311-333294 (RV)

## 2002 Economic Census

*Manufacturing*

Industry Series



USCENSUSBUREAU

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



## CONTENTS

Introduction to the Economic Census .....	v
Manufacturing .....	ix

### Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002 .....	2
3. Detailed Statistics by Industry: 2002 .....	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002 .....	5
6a. Products Statistics: 2002 and 1997 .....	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	8
7. Materials Consumed by Kind: 2002 and 1997.....	9

### Appendixes

A. Explanation of Terms .....	A-1
B. NAICS Codes, Titles, and Descriptions .....	B-1
C. Methodology .....	C-1
D. Geographic Notes .....	--
E. Metropolitan and Micropolitan Statistical Areas .....	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997 .....	F-1

-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)					
333294, Food product machinery manufacturing .....	2002..	528	549	16 237	752 506	9 227	18 223	335 964	1 697 180	1 189 624	2 865 973	'69 634
	2001..	N	N	17 733	704 970	10 382	20 265	325 819	1 410 596	1 264 770	2 707 791	50 249
	2000..	N	N	18 376	736 348	10 992	21 719	350 687	1 519 475	1 309 062	2 860 402	57 913
	1999..	N	N	19 102	725 190	11 506	22 098	356 461	1 592 849	1 304 218	2 899 710	70 573
	1998..	N	N	19 054	728 644	11 371	22 474	363 294	1 596 328	1 320 428	2 906 838	61 636
	1997..	573	593	18 898	711 852	11 436	22 511	353 259	1 581 509	1 290 673	2 857 928	79 890

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>333294, Food product machinery manufacturing</b>												
United States .....	1	549	203	16 237	752 506	9 227	18 223	335 964	1 697 180	1 189 624	2 865 973	'69 634
California .....	2	72	27	1 572	67 361	957	1 950	31 518	142 225	93 917	232 028	'15 343
Georgia .....	1	27	9	888	40 320	447	915	16 717	71 857	64 547	137 247	'1 591
Idaho .....	—	8	3	136	5 197	105	224	3 672	6 822	7 215	15 541	'218
Illinois .....	—	38	15	1 601	81 905	970	1 878	44 816	202 176	174 185	378 406	'6 266
Iowa .....	—	17	11	835	40 469	460	845	17 076	93 308	70 713	161 902	'3 454
Kansas .....	2	18	8	562	25 313	298	619	9 668	58 097	34 986	94 389	'1 577
Massachusetts .....	1	8	2	226	9 596	151	295	5 620	28 217	12 928	41 167	'312
Michigan .....	2	18	3	229	8 195	127	248	3 799	19 868	13 838	34 190	'282
Minnesota .....	1	24	15	1 055	50 838	588	1 182	20 536	81 843	121 720	203 753	'4 692
New Hampshire .....	2	7	2	117	5 381	55	125	1 994	15 051	7 097	21 976	'109
New Jersey .....	—	14	4	231	9 654	142	225	4 328	20 504	15 273	34 668	'447
New York .....	2	21	2	231	8 371	140	204	3 232	18 592	14 565	32 681	'970
North Carolina .....	3	6	4	279	12 384	158	319	5 517	28 973	26 933	56 374	'688
Ohio .....	—	23	13	1 396	77 533	654	1 280	25 563	208 787	109 218	310 619	'5 367
Pennsylvania .....	2	24	12	736	36 552	453	980	18 498	73 030	45 218	118 006	'1 477
Texas .....	2	24	6	605	23 290	393	725	11 293	43 355	35 579	78 750	'1 474
Virginia .....	1	7	2	208	11 677	83	189	3 620	25 141	16 253	41 670	'734
Washington .....	—	26	7	648	27 962	421	857	15 503	85 263	47 607	132 506	'2 179
Wisconsin .....	2	49	23	1 815	80 336	1 055	2 060	37 338	176 508	130 131	308 487	'6 430

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>333294, Food product machinery manufacturing</b>	
Companies <sup>1</sup> .....	number.. 528
All establishments <sup>2</sup> .....	number.. 549
Establishments with 1 to 19 employees .....	number.. 346
Establishments with 20 to 99 employees .....	number.. 160
Establishments with 100 employees or more .....	number.. 43
All employees <sup>3</sup> .....	number.. 16 237
Total compensation .....	\$1,000.. 907 990
Annual payroll .....	\$1,000.. 752 506
Total fringe benefits .....	\$1,000.. 155 484
Production workers, average for year .....	number.. 9 227
Production workers on March 12 .....	number.. 9 012
Production workers on May 12 .....	number.. 9 351
Production workers on August 12 .....	number.. 9 373
Production workers on November 12 .....	number.. 9 127
Production worker hours .....	1,000.. 18 223
Production worker wages .....	\$1,000.. 335 964
Total cost of materials .....	\$1,000.. 1 189 624
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 1 005 210
Resales .....	\$1,000.. 117 235
Purchased fuels .....	\$1,000.. 4 672
Purchased electricity .....	\$1,000.. 15 000
Contract work .....	\$1,000.. 47 507
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 223 729
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. -
Total value of shipments .....	\$1,000.. 2 865 973
Primary products value of shipments .....	\$1,000.. 2 347 746
Secondary products value of shipments .....	\$1,000.. 245 211
Total miscellaneous receipts .....	\$1,000.. 273 016
Value of resales .....	\$1,000.. 173 286
Contract receipts .....	\$1,000.. 14 868
Other miscellaneous receipts .....	\$1,000.. 84 862
Primary products specialization ratio .....	percent.. 91
Value of primary products shipments made in all industries .....	\$1,000.. 2 471 317
Value of primary products shipments made in this industry .....	\$1,000.. 2 347 746
Value of primary products shipments made in other industries .....	\$1,000.. 123 571
Coverage ratio .....	percent.. 95
Value added .....	\$1,000.. 1 697 180
Total inventories, beginning of year .....	\$1,000.. 484 040
Finished goods inventories .....	\$1,000.. 174 555
Work-in-process inventories .....	\$1,000.. 111 865
Materials and supplies inventories .....	\$1,000.. 197 620
Total inventories, end of year .....	\$1,000.. 512 018
Finished goods inventories .....	\$1,000.. 179 923
Work-in-process inventories .....	\$1,000.. 127 328
Materials and supplies inventories .....	\$1,000.. 204 767
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. <sup>1</sup> 096 876
Total capital expenditures (new and used) .....	\$1,000.. <sup>6</sup> 69 634
Buildings and other structures (new and used) .....	\$1,000.. <sup>8</sup> 209
Machinery and equipment (new and used) .....	\$1,000.. <sup>6</sup> 1 425
Automobiles, trucks, etc., for highway use .....	\$1,000.. <sup>5</sup> 788
Computers and peripheral data processing equipment .....	\$1,000.. <sup>7</sup> 836
All other expenditures for machinery and equipment .....	\$1,000.. <sup>4</sup> 7 801
Total retirements .....	\$1,000.. <sup>5</sup> 4 434
Gross value of depreciable assets at end of year .....	\$1,000.. <sup>1</sup> 112 076
Depreciation charges during year .....	\$1,000.. <sup>6</sup> 9 540
Total rental payments .....	\$1,000.. 39 576
Buildings and other structures .....	\$1,000.. 30 347
Machinery and equipment .....	\$1,000.. 9 229
Total other expenses <sup>4</sup> .....	\$1,000.. 198 227
Response coverage ratio <sup>5</sup> .....	percent.. 82
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 12 188
Communications services <sup>4</sup> .....	\$1,000.. 8 075
Legal services <sup>4</sup> .....	\$1,000.. 5 825
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 3 359
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 10 166
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 4 593
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 1 132
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 5 524
Taxes and license fees <sup>4</sup> .....	\$1,000.. 9 715
All other expenses <sup>4</sup> .....	\$1,000.. 137 650

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on 2002 Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
333294, Food product machinery manufacturing											
All establishments .....	1	549	16 237	752 506	9 227	18 223	335 964	1 697 180	1 189 624	2 865 973	'69 634
Establishments with—											
1 to 4 employees .....	7	200	424	18 983	245	423	8 474	37 263	29 770	67 001	'1 148
5 to 9 employees .....	3	68	488	21 745	270	527	9 226	51 015	37 266	88 125	'1 606
10 to 19 employees .....	3	78	1 100	47 914	687	1 331	23 716	95 831	72 123	167 195	'5 007
20 to 49 employees .....	1	106	3 233	134 208	1 997	3 854	62 669	259 938	219 251	479 174	'14 697
50 to 99 employees .....	1	54	3 517	142 818	2 066	4 168	67 710	316 899	213 223	530 835	'10 859
100 to 249 employees .....	—	40	i	D	D	D	D	D	D	D	D
250 to 499 employees .....	—	2	f	D	D	D	D	D	D	D	D
500 to 999 employees .....	—	1	f	D	D	D	D	D	D	D	D
1,000 to 2,499 employees .....	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	190	592	26 288	347	620	11 838	49 367	37 891	87 253	'1 455

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
333294	Food product machinery manufacturing .....	549	16 237	752 506	9 227	18 223	335 964	1 697 180	1 189 624	2 865 973	'69 634
3332941	Dairy and milk products plant machinery and equipment (except bottling and packaging).....	21	1 511	67 088	1 045	2 012	39 045	169 092	180 039	357 983	'5 639
3332943	Commercial food products machinery (except packaging machinery and food cooking and warming equipment) .....	111	5 905	270 761	3 312	6 744	122 695	590 214	440 995	1 020 913	'19 831
3332945	Industrial machinery and equipment for manufacturing or processing foods, beverages, and animal and fowl feed .....	138	7 181	341 060	3 901	7 642	140 561	802 665	463 108	1 245 599	'36 199

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333294	Food product machinery manufacturing .....	2002.. N 1997.. N	X X	X X	2 471 317 2 564 441
3332941	Dairy and milk products plant machinery and equipment (except bottling and packaging) .....	2002.. N 1997.. N	X X	X X	299 167 285 898
33329411	Dairy and milk products plant machinery and equipment (except bottling and packaging) .....	2002.. N 1997.. N	X X	X X	299 167 282 408
3332941121	Industrial machinery and equipment for treating milk and dairy products by means of a change in temperature .....	2002.. 18 1997.. N	X X	X X	215 863 N
3332941142	Other dairy and milk products plant machinery and equipment .....	2002.. 22 1997.. N	X X	X X	44 487 N
3332941171	Parts and attachments for dairy and milk products plant machinery and equipment (except bottling and packaging) .....	2002.. 14 1997.. 13	X X	X X	38 817 40 296
3332941Y	Dairy and milk products plant machinery and equipment (except bottling and packaging), nsk .....	2002.. N 1997.. N	X X	X X	— 3 490
3332941YVV	Dairy and milk products plant machinery and equipment (except bottling and packaging), nsk .....	2002.. N 1997.. N	X X	X X	— 3 490
3332943	Commercial food products machinery (except packaging machinery and food cooking and warming equipment) .....	2002.. N 1997.. N	X X	X X	994 839 943 885
33329431	Commercial food products slicers .....	2002.. N 1997.. N	X X	X X	88 113 98 212
3332943111	Commercial food products slicers .....	2002.. 12 1997.. 15	X X	X X	88 113 98 212
33329432	Commercial food products choppers, grinders, cutters, dicers, and similar machines .....	2002.. N 1997.. N	X X	X X	110 663 159 683
3332943221	Commercial food products choppers, grinders, cutters, dicers, and similar machines .....	2002.. 35 1997.. 36	X X	X X	110 663 159 683
33329433	Commercial food products mixers and whippers (except drink mixers) .....	2002.. N 1997.. N	X X	X X	88 372 89 555
3332943331	Commercial food products mixers and whippers (except drink mixers) .....	2002.. 15 1997.. 15	X X	X X	88 372 89 555
33329434	Other commercial food preparation machines, including tenderizers (power-driven) (except packaging machinery and food cooking and warming equipment) .....	2002.. N 1997.. N	X X	X X	135 810 156 499
3332943441	Other commercial food preparation machines, including tenderizers (power-driven) (except packaging machinery and food cooking and warming equipment) .....	2002.. 37 1997.. 40	X X	X X	135 810 156 499
33329435	Parts and attachments for commercial food preparation machines (except packaging machinery and food cooking and warming equipment) .....	2002.. N 1997.. N	X X	X X	169 581 120 384
3332943551	Parts and attachments for commercial food preparation machines (except packaging machinery and food cooking and warming equipment) .....	2002.. 51 1997.. 43	X X	X X	169 581 120 384
33329436	Industry bakery machinery and equipment .....	2002.. N 1997.. N	X X	X X	374 424 285 027
3332943661	Industrial bakery dough mixers, dividers, and molders .....	2002.. 16 1997.. 19	X X	X X	77 069 76 908
3332943671	Industrial bakery bake ovens (including traveling tray) .....	2002.. 17 1997.. 20	X X	X X	83 008 91 531
3332943681	Industrial rolling machines, including pastry machines for the manufacture of bakery products .....	2002.. 5 1997.. 5	X X	X X	15 028 9 187
3332943691	Other industrial bakery machinery and equipment .....	2002.. 42 1997.. 31	X X	X X	199 319 107 401
3332943Y	Commercial food products machinery (except packaging machinery and food cooking and warming equipment), nsk .....	2002.. N 1997.. N	X X	X X	27 876 34 525
3332943YVV	Commercial food products machinery (except packaging machinery and food cooking and warming equipment), nsk .....	2002.. N 1997.. N	X X	X X	27 876 34 525
3332945	Industrial machinery and equipment for manufacturing or processing foods, beverages, and animal and fowl feed .....	2002.. N 1997.. N	X X	X X	990 340 1 089 558
33329451	Other industrial food and feed machinery .....	2002.. N 1997.. N	X X	X X	458 199 532 834
3332945101	Industrial presses, crushers, and similar machinery used in the production of wine, cider, fruit juices, and similar beverages .....	2002.. 13 1997.. 13	X X	X X	48 547 54 316
3332945111	Other industrial machinery, for the preparation of fruits, vegetables, and nuts (not including the extraction or preparation of fixed vegetable oils) .....	2002.. 18 1997.. 9	X X	X X	34 383 13 553
3332945116	Industrial machinery and equipment for freezing and rapid chilling of food products .....	2002.. 10 1997.. 17	X X	X X	18 174 26 892
3332945121	Industrial driers for the manufacture of food products .....	2002.. 7 1997.. 7	X X	X X	9 332 30 576
3332945131	Other industrial machinery and equipment, for treating food products by a process involving a change in temperature (including cooking and roasting) .....	2002.. 21 1997.. 28	X X	X X	69 033 85 670

See footnotes at end of table.



**Table 6a. Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333294	Food product machinery manufacturing—Con.				
3332945	Industrial machinery and equipment for manufacturing or processing foods, beverages, and animal and fowl feed—Con.				
33329451	Other industrial food and feed machinery—Con.				
3332945135	Industrial machines for cleaning, sorting, or grading seed, grain, and dried leguminous vegetables .....	2002.. 11	X	X	20 662
		1997.. 6	X	X	16 201
3332945141	Other industrial machinery used in the milling industry and for working of cereals and dried leguminous vegetables .....	2002.. 3	X	X	D
		1997.. 3	X	X	1 999
3332945151	Other industrial machinery for the extraction and preparation of animal and fixed vegetable fats and oils .....	2002.. 3	X	X	D
		1997.. 4	X	X	8 179
3332945161	Other industrial food and feed products machinery .....	2002.. 46	X	X	243 310
		1997.. 66	X	X	295 448
33329452	Other industrial machinery for sorting, grading, and cleaning fruits, vegetables, and eggs and other machinery for processing and preparing meat and poultry .....	2002.. N	X	X	284 395
		1997.. N	X	X	297 454
3332945206	Industrial machinery for sorting, grading, and cleaning fruits, vegetables, and eggs .....	2002.. 23	X	X	74 887
		1997.. 30	X	X	98 395
3332945208	Other industrial machinery and equipment for processing and preparing meat and poultry (excluding the extraction and preparation of oils) .....	2002.. 39	X	X	209 508
		1997.. 37	X	X	199 059
33329453	Parts and attachments for industrial food and feed products machinery .....	2002.. N	X	X	169 783
		1997.. N	X	X	188 311
3332945371	Parts and attachments for bakery furnaces and ovens .....	2002.. 5	X	X	6 767
		1997.. 4	X	X	3 694
3332945376	Parts and attachments for presses, crushers, and similar machinery used in the production of wine, cider, fruit juices, and similar beverages .....	2002.. 2	X	X	766
		1997.. 6	X	X	4 480
3332945381	Parts and attachments for sorting, grading, and cleaning fruits, vegetables, and eggs .....	2002.. 11	X	X	5 224
		1997.. 11	X	X	17 669
3332945392	Other parts and attachments for industrial food products machinery .....	2002.. 44	X	X	157 026
		1997.. N	X	X	N
3332945Y	Industrial machinery and equipment for manufacturing or processing foods, beverages, and animal or fowl feed, nsk .....	2002.. N	X	X	77 963
		1997.. N	X	X	70 959
3332945YV	Industrial machinery and equipment for manufacturing or processing foods, beverages, and animal or fowl feed, nsk .....	2002.. N	X	X	77 963
		1997.. N	X	X	70 959
333294W	Food product machinery manufacturing, nsk, total .....	2002.. N	X	X	186 971
		1997.. N	X	X	245 100
333294WY	Food product machinery manufacturing, nsk, total .....	2002.. N	X	X	186 971
		1997.. N	X	X	245 100
333294WYWW	Food product machinery manufacturing, nsk, for nonadministrative-record establishments .....	2002.. N	X	X	100 563
		1997.. N	X	X	110 214
333294WYWY	Food product machinery manufacturing, nsk, for administrative-record establishments .....	2002.. N	X	X	86 408
		1997.. N	X	X	134 886

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3332941	Dairy and milk products plant machinery and equipment (except bottling and packaging)	
	United States .....	2002 .. 299 167
		1997 .. 285 898
	Minnesota .....	2002 .. 43 481
		1997 .. 19 908
	Wisconsin .....	2002 .. 96 298
		1997 .. 93 574
3332943	Commercial food products machinery (except packaging machinery and food cooking and warming equipment)	
	United States .....	2002 .. 994 839
		1997 .. 943 885
	California .....	2002 .. 68 055
		1997 .. 37 962
	Georgia .....	2002 .. 71 027
		1997 .. 69 139
	Illinois .....	2002 .. 189 707
		1997 .. 184 291
	Iowa .....	2002 .. 23 446
		1997 .. 18 065
	Kansas .....	2002 .. 10 738
		1997 .. N
	New Jersey .....	2002 .. 30 885
		1997 .. 32 020
	New York .....	2002 .. 7 951
		1997 .. 48 604
	North Carolina .....	2002 .. 24 980
		1997 .. 53 248
	Ohio .....	2002 .. 110 531
		1997 .. 143 313
	Pennsylvania .....	2002 .. 35 319
		1997 .. 27 163
	Texas .....	2002 .. 27 089
		1997 .. 17 090
	Washington .....	2002 .. 57 227
		1997 .. 44 032
	Wisconsin .....	2002 .. 21 788
		1997 .. N
3332945	Industrial machinery and equipment for manufacturing or processing foods, beverages, and animal and fowl feed	
	United States .....	2002 .. 990 340
		1997 .. 1 089 558
	California .....	2002 .. 99 592
		1997 .. 156 189
	Florida .....	2002 .. 47 775
		1997 .. 64 306
	Georgia .....	2002 .. 40 879
		1997 .. 89 024
	Illinois .....	2002 .. 36 357
		1997 .. 46 119
	Iowa .....	2002 .. 88 521
		1997 .. 78 778
	Kansas .....	2002 .. 78 699
		1997 .. 70 985
	Michigan .....	2002 .. 3 423
		1997 .. 6 336
	Minnesota .....	2002 .. 34 722
		1997 .. 31 884
	North Carolina .....	2002 .. 22 737
		1997 .. N
	Ohio .....	2002 .. 131 739
		1997 .. 101 442
	Pennsylvania .....	2002 .. 38 179
		1997 .. 40 176
	Texas .....	2002 .. 41 818
		1997 .. 36 235
	Washington .....	2002 .. 62 809
		1997 .. 36 830
	Wisconsin .....	2002 .. 106 630
		1997 .. 51 557

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333294	Food product machinery manufacturing		
00900001	Total materials .....2002..	X	1 005 210
	.....1997..	X	1 091 528
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic) .....2002..	X	12 261
	.....1997..	X	9 007
33391103	All other pumps .....2002..	X	4 428
	.....1997..	X	13 329
33291207	Fluid power valves (hydraulic and pneumatic) .....2002..	X	8 347
	.....1997..	X	9 544
33399501	Fluid power cylinders and rotary actuators (hydraulic and pneumatic) .....2002..	X	3 913
	.....1997..	X	3 984
33291203	Fluid power hose and tube fittings and assemblies (hydraulic and pneumatic) .....2002..	X	4 732
	.....1997..	X	4 938
33399901	Fluid power filters (hydraulic and pneumatic) .....2002..	X	1 543
	.....1997..	X	1 786
00190089	Other fluid power products, hydraulic and pneumatic .....2002..	X	3 059
	.....1997..	X	2 186
332000A1	Metal tanks, heat exchangers, steam condensers, and other boiler products (fabricated steel plate, and weldments).....2002..	X	37 760
	.....1997..	X	40 912
33200059	All other fabricated metal products (excluding forgings) .....2002..	X	77 073
	.....1997..	X	68 858
33210000	Forgings .....2002..	X	4 094
	.....1997..	X	N
33151001	Iron and steel castings (rough and semifinished) .....2002..	X	17 357
	.....1997..	X	23 679
33152005	Aluminum and aluminum-base alloy castings (rough and semifinished) .....2002..	X	8 767
	.....1997..	X	20 989
33152003	Other nonferrous metal castings, rough and semifinished (including aluminum and aluminum-base alloy).....2002..	X	4 632
	.....1997..	X	4 716
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	38 358
	.....1997..	X	49 466
33120016	Steel sheet and strip (including tinplate) .....2002..	X	34 847
	.....1997..	X	N
33120033	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	15 948
	.....1997..	X	15 089
33131500	Aluminum and aluminum-base alloy sheet, plate, foil, and welded tubing.....2002..	X	9 456
	.....1997..	X	N
33100055	All other aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	2 207
	.....1997..	X	2 838
33100077	Other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	9 854
	.....1997..	X	12 524
33531225	Fractional horsepower electric motors and generators (less than 1 hp) .....2002..	X	9 294
	.....1997..	X	N
33531221	Integral horsepower electric motors and generators (1 hp or more) .....2002..	X	13 969
	.....1997..	X	18 091
33299101	Ball and roller bearings (mounted or unmounted) .....2002..	X	12 247
	.....1997..	X	12 310
33361200	Mechanical speed changers, gears, and industrial high-speed drives .....2002..	X	13 163
	.....1997..	X	21 821
001900B1	Electrical transmission, distribution, and control equipment.....2002..	X	31 705
	.....1997..	X	43 307
33100038	Aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	D
	.....1997..	X	N
32192001	Wood boxes, pallets, skids, and containers .....2002..	X	4 275
	.....1997..	X	5 990
33100082	Other nonferrous metal shapes and forms (excluding aluminum and aluminum-base alloy and copper and copper-base alloy castings, forgings, and fabricated metal products) .....2002..	X	D
	.....1997..	X	N
00970099	All other materials and components, parts, containers, and supplies.....2002..	X	223 611
	.....1997..	X	422 007
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	397 441
	.....1997..	X	284 157

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.